EXHIBIT C

GARY LUDWIG
2313 CLOVER LANE
CHAMPAIGN, IL 61821

August 8, 2016

James Behrenbrinker
Attorney at Law
Minneapolis Grain Exchange
412 South Fourth Street
Suite 1050
Minneapolis, MN 55415

RE: Cheri Hanson (Andrew Layton) vs. Gold Cross Ambulance et. al.

Dear Mr. Behrenbrinker:

The following report is in response to your request for my opinions with respect to the above listed matter.

Introduction

This report discusses the events surrounding the death of Andrew Derek Layton on January 1, 2013 in Mankato, Minnesota while being treated by Gold Cross EMS personnel.

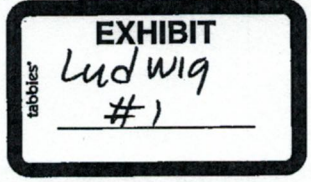
This report also details my qualifications, provides a listing of the material I reviewed in preparation for this report, identifies the parties involved, provides a history of the incident(s), identifies the relevant standard of care, provides a discussion of the circumstances, and finally provides my conclusions. A listing of all cases where I have been involved in during the last four years as a consultant and/or expert witness can be found in Appendix A. My fee schedule can be found attached as Appendix B. Fees for my services are not contingent upon the outcome of the case.

Qualifications of the Expert

I am well-known author, educator, lecturer, and consultant who has successfully managed two large award-winning metropolitan EMS systems. I have a total of 39 years of fire, rescue, and EMS experience and have been a paramedic for over 36 years.

I currently serve as the fire chief for Champaign, Illinois. I am also an instructor in the paramedic education program for Jefferson County Community College in Hillsboro, Missouri.

I recently retired as a deputy fire chief on the senior command staff for the Memphis Fire Department (Tennessee). The Memphis Fire Department is a 1,987 person fire department, operating from 57 fire stations, a $162.5 million budget, and last year responded on approximately 145,000 alarms of which over 111,000 were EMS related.



I retired as the Chief Paramedic from the St. Louis Fire Department in 2001. I was employed full time with the City of St. Louis for 25 years after starting employment with the City two months out of high school. During my career I rose through the ranks and managed various programs or Bureaus including field operations, support services, EMS, and the Fire Alarm Communications Center.

During my tenure with the City of St. Louis, I had countless accomplishments. It was during my administration of EMS, that the fire department was awarded "Missouri's EMS Service of the Year for 1998" and I personally was awarded "Missouri's EMS Administrator of the Year for 1998." I have received several Mayoral Awards for Heroism and two Mayoral Awards for safety and improved levels of service. During my administration of the EMS system in Memphis, Tennessee, it was awarded the "EMS Service of the Year" by the Tennessee Ambulance Service Association and was awarded the "Career fire-based EMS Service of the Year" by the Congressional Fire Service Institute in 2014.

It is estimated that I have responded on over 25,000 fire, rescue, and EMS incidents during my 39-year career and have performed at various levels ranging from patient care as a paramedic to incident commander at countless emergency scenes and planned events. Some planned events that I have commanded include United States Presidential debates, Presidential motorcades, the Papal Visit of John Paul II to St. Louis, the 1993 Floods of St. Louis, United States Summer Olympic Festival, Super Bowl parades, and World Series Baseball.

I currently serve as Immediate Past Chair for the EMS Section of the International Association of Fire Chiefs (IAFC). The EMS Section is one of the largest and most active sections of the IAFC.

I have earned a Bachelor's degree in Business Administration and a Masters degree in Management and Business. Additionally, I am a licensed paramedic and a certified fire fighter. I am also a contributing editor and write a monthly column that appears in *Firehouse Magazine* and I am a "page one" columnist for *Firehouse.com.* Additionally, I write a monthly leadership column that appears in *JEMS Magazine.*

I have authored over 500 articles in such publications as the *IAFC's On Scene, 9-1-1 Magazine, Fire Chief Magazine, Firehouse Magazine, Journal of Emergency Medical Services, EMS Magazine,* and *National Fire & Rescue.*

Also, I am a nationally known and requested speaker that has made over 250 public presentations at conferences or professional seminars in 42 states and foreign countries including every major fire or EMS conference, such as *Fire-Rescue International, Fire-Rescue Med, EMS Today, EMS Expo, Firehouse Expo, Firehouse Central, Firehouse World, Fire Department Instructor's Conference (FDIC),* and *Fire-Rescue East.*

I am also the 2014 winner of the prestigious James O Page EMS Leadership award.

Materials Reviewed in Conjunction with this Report

In formulating my opinion(s), I have reviewed the following materials:

1. Complaint
2. Gold Cross Ambulance Patient Reports (Run Number 69 and 70)
3. Letter to Cheri Hanson from Daniel G Hankins, MD, Medical Director, Mayo Clinic Medical Transport
4. Letter to Cheri Hanson from Paul Anderson, COO Gold Cross Ambulance Service dated September 5, 2013 attached with four Gold Cross medical guidelines (A1. Overview; A2. General Assessment and Care; H1. Behavioral Emergencies; H2. Law Enforcement Custody
5. Andrew Layton timeline
6. Call for Service transcript
7. Mankato Police report #13-47
8. Transcript of Michael Burt interview by Minnesota Department of Public Safety, Bureau of Criminal Apprehension dated 1/16/2013
9. Transcript of Thomas Drews interview by Minnesota Department of Public Safety, Bureau of Criminal Apprehension dated 1/16/2013
10. Kristofer Keltgen deposition
11. Paramedic Michael Jason Burt deposition
12. Paramedic Thomas John Drews deposition
13. Butch Hutson, MD deposition
14. Documents from Ramsey County Medical Examiner
15. Officer Kenneth Baker deposition
16. Officer Daniel Best deposition
17. Officer Jeremy Clifton deposition
18. Officer Craig Fredericks deposition
19. Matthew Huettl deposition
20. Officer Audrey Kranz deposition
21. Officer Kyley Lindholm deposition
22. Blue Earth County Attorney's Case File
23. *Emergency Care in the Streets,* Nancy Caroline, Jones & Bartlett Learning, 2013.
24. *Paramedic Care: Principles & Practice,* Bledsoe, Porter, Cherry, Brady Publishing, 2012.
25. National Association of EMS Physicians, Position Paper, Patient Restraint in Emergency Medical Service Systems, Volume 6, July \ September 2002
    - Videos, recordings, and photos (
    - Officer Best car video
    - Hyvee Store video
    - Balgura cell video
    - Blue Earth County Jail Booking Area
    - Audio recordings of interview
    - Photos of Layton Clothing

- Blue Earth County radio traffic
- Officer Groby dash cam

Parties Involved in Incident

Andrew Layton	Patient
Jason Burt	Paramedic
Thomas Drews	Paramedic
Kenneth Baker	Police Officer
Daniel Best	Police Officer
Jeremy Clifton	Police Officer - Commander
Craig Fredericks	Police Officer - Commander
Matthew Huettl	Police Officer
Audrey Kranz	Police Officer
Kyley Lindholm	Police Officer
Kristofer Keltgen	Operations Manager – Gold Cross

History of Incident

On January 1, 2013, Gold Cross Ambulance Vehicle 459 with Paramedics Thomas Drews and Michael Burt were dispatched as a 911 response to 410 S. Riverfront Drive at the Hy-Vee Store in Mankato, Minnesota for a report of overdose/poisoning ingestion. The run number was 69 and the patient was Andrew Layton. The call was received at 0458 hours; was dispatched at 0459 hours; ambulance went enroute at 0500 hours; and arrived on the scene at 0505 hours. The total time from receipt of call until the ambulance was on the scene was seven minutes. The patient was transported to the Blue Earth County Criminal Justice Center at 0512 hours. The total time on scene was five minutes. The ambulance arrived at the Blue Earth County Criminal Justice Center at 0521 hours for a total transport time of nine minutes. From the time the call was received until the patient arrived at the Blue Earth County Criminal Justice Center was 23 minutes.

Prior to the ambulance arriving at the scene, Mankato Police Officer Kenneth Baker and Officer Dan Best were dispatched to a suspicious person lying in the front cart area in the Hy-Vee store. Officer Best did observe Andrew Layton laying in a fetal position snoring. It was Officer Best's opinion that Mr. Layton was intoxicated. Officer Best attempted to wake Mr. Layton up. At some point Mr. Layton stood up and Officer Best said he believed Mr. Layton was being combative because of the physical actions Mr. Layton made. According to the police report, a physical altercation occurred between Mr. Layton and Officers Best and Baker. The store manager assisted Officer Best, and Officer Best called for further police assistance on his radio. Within a couple of minutes five additional police officers arrived on the scene. Eventually, two sets of handcuffs were used to restrain Mr. Layton. Leg restraints were also used to pin Mr. Layton's legs together. According to Paramedic Burt, Mr. Layton was also hog-tied (Burt Deposition p.60). The Medical Examiner's report references Mr. Layton being hog-tied and the use of a taser. A spit mask was also placed over Mr. Layton's face.

Police Commander Craig Fredericks advised dispatch to contact Gold Cross ambulance to have Mr. Layton transported to the Blue Earth County Justice Center. One main reason was to utilize the backboard that the ambulance possessed.

According to the Gold Cross patient care report (PCR), Paramedics Drews and Burt arrived at the Hy-Vee to find Mr. Layton and the police officers. The report further indicates that Mr. Layton was restrained with handcuffs and a spit hood. The paramedics were asked to put additional restraints on Mr. Layton – which they complied. According to the PCR, the police officers felt Mr. Layton was high on "meth."

The PCR further indicates that Gold Cross was called to the scene to transport Mr. Layton to jail since it would be easier to transport him lying on the stretcher. According to the police report, an inquiry was made by Officer Best of the Gold Cross ambulance crew if Mr. Layton should be medically evaluated and he was advised that Mr. Layton was too combative to be medically evaluated and should be transported to the jail. The PCR also confirms Mr. Layton had a spit mask on.

Mr. Layton was placed on the stretcher in a restrained prone position (handcuffed behind back, legs at ankles bound together with police hobble strap, feet tied to stretcher, three stretcher belts were used (one over lower legs, one over buttocks area, and one over mid or thoracic region of back) to tie down to stretcher and spit hood was over head, covering his nose and mouth) and then the transport began. During the transport, according to the police report and PCR, Mr. Layton became still and stopped struggling. The police report indicates he either passed out or was sleeping. Both the police report and PCR indicate Paramedic Burt felt for a pulse and indicated one was present.

Upon arrival at the jail, Mr. Layton was removed from the ambulance and taken into the Sally Port. The video from the jail and the police report validate when inside the booking area, it was discovered that Mr. Layton was not breathing and was in cardiac arrest.

A second ambulance was dispatched to assist with Mr. Layton who was now in cardiac arrest. A second PCR was generated for Mr. Layton with the Run Number of 70. The time initiating this PCR is 0527 – some six minutes after arrival at the jail. Resuscitative efforts were begun and Mr. Layton was transported to the Mayo Clinic Health System emergency room at 0548 hours, some 21 minutes after it was discovered that Mr. Layton was in cardiac arrest.

Mr. Layton was transported in cardiac arrest, resuscitated, and admitted to the hospital with an apparent anoxic brain injury. He died on January 5, 2013.

Standards

The standard of care and curriculum for paramedics is formulated at the national level and coordinated through the United States Department of Transportation; National Highway Traffic Safety Administration. This standard of care and curriculum is called the "National EMS Education Standards – Paramedic Instructional Guidelines."

Various paramedic textbook publishing companies and their authors will follow this published document when writing and producing paramedic textbooks. These textbooks are then used by educational institutions involved in paramedic education. Paramedic educational institutions must be accredited through the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). In order to test through the National Registry of EMTs (NREMT), the paramedic student must have graduated from an accredited paramedic education program. Paramedics, who pass the test National Registry, are then licensed by their respective states as paramedics.

Additionally, EMS services and institutions that offer Continuing Education Units (CEUs) for licensure purposes will also follow the "National EMS Education Standards – Paramedic Instructional Guidelines."

Additionally, professional EMS organizations such as the National Association of EMS Physicians (NAEMSP) issue position papers on various topics within the EMS profession. These position papers are based upon the relevant medical literature and recommendations. In the case of Mr. Mr. Layton, NAEMSP has a position paper titled, "Patient Restraint in Emergency Medical Service Systems," published in 2002.

Additionally, local EMS services also establish the standard of care through written protocols, issued by the Medical Director of the service.

Discussion

In reviewing this case, I have identified several areas, which I believe indicate behavior by Gold Cross personnel that breaches the applicable standard of care.

Upon review, Gold Cross EMS breached the applicable standard of care in the following areas:

1. *Patient Assessment*

Upon their arrival on the scene, Paramedics Burt and Drews had a duty to perform a thorough assessment of Mr. Layton, in order to determine and implement the most appropriate prehospital emergency medical care plan for their patient. From a review of the records, Mr. Layton was not properly assessed by the paramedics. Both Paramedic Burt and Paramedic

Drews knew and were educated on the importance of conducting a proper assessment of the patient (Burt Deposition p. 90 and Drews Deposition pp. 14 and 54). The patient assessment performed by Gold Cross paramedics totally ignored that they were originally dispatched for overdose/poisoning ingestion. The PCR even documents that "the police officers thought that he was high on Meth." Additional documentation on the PCR reflects that the patient had a past history of "drug abuse" which was obtained from police officers on the scene (Drews Deposition p.52).

What limited assessment was done or not done reflect missed opportunities to treat Mr. Layton for what could have been a life-threatening condition including an assessment of his mental status that reflects "Altered LOC" on page 1 of the PCR Run Number 69 and "Level of Consciousness: Pain Scale=Not Assessed" on page 2 of PCR Run Number 69.

The standard of care mandates that Mr. Layton should have received a primary assessment, secondary assessment, and on-going assessment the morning of January 1, 2013 when the Gold Cross paramedics were called to the scene involving Mr. Layton. Each one of these three types of assessment is a valuable tool for the paramedic in determining what is really wrong with the patient. Each one is interlinked, giving more information each time to the paramedic, so they can effectively devise a treatment plan. The more detailed each assessment is, the better treatment decisions can be made and the better the patient's overall progression through the healthcare system will occur. Every patient should receive all three assessments. Contrary to the testimony of Paramedic Drews, who testified that patient assessment varies or is different from patient to patient (Drews Deposition pp 12 and 55), a primary, secondary, and on-going assessment should be performed on every call, every patient, every time!

Mr. Layton was obviously exhibiting a behavioral emergency based on his actions reported by the police officers. They had reason to believe he may have overdosed on a substance or had used another substance to elicit his behavior.

There are several questionable areas of a proper assessment – if they were even done. This includes the examination of Mr. Layton's pupils. A spit mask was on Mr. Layton that also covered his eyes. Paramedic Drews indicates he was able to visualize Mr. Layton's pupils with the mask on (Drews Deposition pp. 135 – 136). Most if not all paramedics would find this examination extremely difficult to accomplish properly with a spit mask on. There are other options or methodologies for controlling a patient who spits including the use of a surgical mask or an oxygen mask.

Other assessment tools would have been the taking of a blood pressure on Mr. Layton. No blood pressure was taken (Drews Deposition p. 132 and Burt Deposition pp. 110-111) and the taking and monitoring of Mr. Layton blood oxygen saturation level through pulse oximetry.

The PCR also indicates Mr. Layton had tachypnea (rapid breathing) with a respiratory rate of 22. Although one can conclude that this may be due to physical exertion, but without a proper

assessment, the etiology cannot be determined. Some reasons for fast breathing can be caused by low oxygen levels (hypoxia), pulmonary embolism, choking, asthma, etc.

Beyond the standard of care, Gold Cross has written guidelines regarding patient assessment titled, "Mayo Clinic Medical Transport Patient Care Guidelines." A.2 General Assessment and Care (Layton 60003 – 60008) provide clear and concise guidelines, including the first bullet point: "Conduct an appropriate assessment of the patient, scene, and circumstances, to determine the best course of action for managing the medical care and transport needs of the response." Although these may be guidelines, there is no ambiguity in the statement. Paramedics Burt and Drew failed to follow their own established guidelines.

Finally, when Paramedic Burt was asked whether he believed whether he performed an adequate assessment of Mr. Layton, he indicated he did not (Burt Deposition, Page 130).

In conclusion, there was a substantial deviation from the standard of care with respect to the assessment of Mr. Layton, although the documentation clearly shows warning signs that Mr. Layton was or could be experiencing a medical emergency.

2. *Placing Patient in Prone Position*

Mr. Layton was hogtied by police and on his stomach on the floor before the paramedics arrived, and then paramedics with two officers transported to the jail in a maximum restrained prone position tied to the ambulance stretcher. The use of maximum prone restraint of a patient for transport is a deviation from the standard of care. The PCR documents that Mr. Layton was transported in a prone position on page 1 of Run Number 69 and also on page 2 in the narrative section.

Paramedics Drews objects in his testimony that Mr. Layton was in a prone position (Drews Deposition p. 92). However, surveillance video from the jail clearly shows Mr. Layton lying prone on a stretcher in the sally port area and in the pre-booking area. Additionally, Paramedic Burt validates Mr. Layton was lying prone on the stretcher (Burt Deposition, pp. 60 – 61). Moreover, placing a pillow under the head and/or shoulder area of a patient, who is in maximum restraint on his stomach tied to the ambulance stretcher, is still prone restraint, notwithstanding Burt's objection.

The standard of care mandates that restrained patients should not be placed in prone position. The National Association of EMS Physicians (NAEMSP), a group that represents Medical Directors of EMS services throughout the United States issued a Position Paper in September 2002 titled, "Patient Restraint in Emergency Medical Service Systems." The Paper says, "Patients should never be transported while hobbled, "hog-tied," or restrained in a prone position with hands and feet behind the back. Patients should never be transported while "sandwiched" between backboards or mattresses. Restraint techniques should never constrict the neck or compromise the airway." The Paper additionally says on page 343, "Again, a patient should

never be hobbled or "hog-tied" with the arms and legs tied together behind the back. During transport, a patient should never be restrained to a stretcher in the prone position or sandwiched between backboards or mattresses."

Numerous paramedic textbooks, developed using the National EMS Education Standards, clearly indicate that patients should not be restrained in a prone position. On page 420 of Paramedic Care: Principles and Practices, it says, "Patients should not be transported while restrained in a prone position. Restraint in a prone position has been associated with positional asphyxia. In addition, nothing should be placed over the face, head, or neck of the patient. A surgical mask placed loosely on the patient may prevent spitting." Additionally, on page 421, it says, "A patient should *never* be hobbled or "hog-tied" with the arms and legs together behind the back. During transport, a patient should *never* be restrained to stretcher in a prone position or sandwiched between backboards or mattresses."

Another widely used textbook in paramedic education, "Emergency Care in the Streets," on page 1,379, it states, "Never hobble tie a patient (tying the feet together). Placing a patient face down in a Reeves stretcher can also be dangerous and lead to positional asphyxia or aspiration." Additionally, on page 1,380, under bullet point #7, it states, "Carefully place the patient on the stretcher or carrying device in a face-up position."

Paramedic Burt validates in his testimony that a patient should not be restrained in a prone patient per the Mayo Clinic's guidelines and his education and training (Burt Deposition, Page 40, 55). Paramedic Burt also is aware of the risk of placing a patient in a prone position (Burt Deposition, Page 55).

The Mayo Clinic Medical Transport Patient Care Guidelines, H.1. Behavioral Emergencies, addresses the issue of how a restrained patient should be transported. It states, "Transport physically restrained patients on the stretcher in a supine or semi-sitting position. Use the left lateral recumbent position, if possible, for patients who must be transported on their side. No prone positions should be used during transport."

The failure of placing Mr. Layton and transporting him in the proper position is deviation from the standard of care.

3. *Not Transporting Mr. Layton to a hospital.*

The failure to transport Mr. Layton to a hospital is a clear deviation from the standard of care. Gold Cross personnel were called to the scene for a suspected overdose and/or possibly a person who was using Meth, according to their own patient care report. Additionally, other documentation supports medical conditions such as an altered level of consciousness, tachypnea, with the addition of no blood pressure or EKG taken, and a questionable examination of the pupils. All of these factors or the lack of obtaining information are indications that Mr. Layton should have been transported to the hospital. Additionally, autopsy pictures

reflect external injuries to Mr. Layton. The fact that he was injured is additional support that he should have been transported to the hospital for examination.

Paramedic Burt in his testimony indicates he did not take Mr. Layton to the hospital since he felt there was no medical emergency (Burt Deposition, Pages 135, 136). Paramedics Burt, Drews and Operations Manager Kristofer Keltgen all refer to Mayo Clinic guidelines, which provided them the latitude to transport where they deemed necessary. Unfortunately, the guidelines they all refer to repeated use the word "patient" within the guideline. Once the word "patient" is used, the dynamics change and it is a medical situation. "Patients" should never be transported to a jail because of a medical condition.

It is the customary and usual practice that when paramedics are called to a scene of a suspected overdose or a person, who is having a behavioral emergency, that the patient is transported to the hospital for medical evaluation by a physician. An advanced life support ambulance is not a prisoner transport van. The dispatching of an ALS ambulance, with thousands of dollars of life saving equipment, and two trained paramedics is not the practical application for transporting a prisoner to a jail.

Conclusion

It is my professional opinion to a degree of reasonable certainty and probability Paramedics Burt and Drews from Gold Cross Ambulance deviated from the standard of care in the following areas:

1. Failed to conduct a proper assessment of Mr. Layton, inclusive of a secondary and on-going assessment.
2. Transported Mr. Layton in a restrained prone position.
3. Transported Mr. Layton to a jail instead of a medical facility where he could be properly evaluated and treated.

As noted above, the opinions expressed in the enclosed report are rendered with reasonable professional certainty and medical probability. I will be available to testify in support of those opinions as necessary.

However, I reserve the right to supplement my report if I am provided with any additional information with respect to this case.

If I can provide any further assistance, please do not hesitate to contact me.

Sincerely,

Gary Ludwig, MS, EMT-P

GARY LUDWIG
2313 CLOVER LANE
CHAMPAIGN, IL 61821

August 22, 2016

James Behrenbrinker
Attorney at Law
Minneapolis Grain Exchange
412 South Fourth Street
Suite 1050
Minneapolis, MN 55415

RE: Cheri Hanson (Andrew Layton) vs Gold Cross Ambulance et. al.

Dear Mr. Behrenbrinker:

As an addendum to my written report of August 8, 2016, I wish to add that my review of the material you provided me is a dramatic departure from the applicable standard of care, and I am of the opinion that the degree of departure by both paramedics shows a deliberate indifference to the medical and safety needs of their patient – Andrew Layton. This opinion is grounded upon the particular facts and circumstances discussed in detail in my report, which are incorporated herein by reference..

I am of this opinion based upon my education, training, and practical field experience, and I will be available to testify in support of those opinions as necessary.

If I can provide any further assistance, please do not hesitate to contact me.

Sincerely,

Gary Ludwig, MS, EMT-P